MODEL OR END ITEM	NEXT ASSY	MODULE OR SER NO. / GAEC SCH NO.	REQD PER MODULE OR END ITEM
LEM	—	MSC LAB T&SUB SEE NOTE 13	1
LEM	—	FMES	2
	—	DMSM	1
	—	LMS-2	2
	—	LMS-1	2
LEM	—	M.I.T. LAB SEE NOTE 1	2
LEM	—	CRIT. ENVIR TEST	2
LEM	LDW340-21215	LTA-1(11)	2

PART NO. LDW300-21800-5

PART NO. LDW300-21800-3

PART NO. LDW300-21800-1 — GAEC SCH NO. 34

(6)

SH REV STATUS: FOR DESCRIPTION OF REV SEE SUBQ SH										
SHEET	1.00	1.10	1.11	2.00	201	3.00				
REV	C	B	C	C	C	C				
SHEET										
REV										
SHEET										
REV										

LAST SECT LTR USED	—
LAST DASH NO. USED	-5

GRUMMAN REL'NFO A/C — PRIM. NO. 257 — LE(003) MP 7/28/16 C

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCE UNLESS SPECIFIED
FRACTIONS - DECIMALS - ANGLES
± 1/64 ± .010 ± 1/4°

ORIG DWG AUTH	
DETAIL SPEC REQUIREMENT	V
CLASS II ENGRG CHANGE	
CLASS I ENGRG CHANGE	

CONTRACT NO. NAS9-1100 — LINE ITEM 2 — DOCUMENTATION TYPE II

DRAWN BY	G. KAMMERER 11-11-65	WEIGHTS	J. Riley 11-12-65
LAYOUT BY		RELIABILITY	T.S. Doyle for J.H. 11/12
CHECKED BY	J. OTERO 11/11/65		
GRP. LEADER	[illegible] 11/11/65		
STRUCTURES	M. FEB 11/12/65	PROJ ENGR	[illegible] 11/18
STRUCTURES	[illegible] 11-12	REL GROUP	[illegible] 11/20

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L. I., NEW YORK

CONTROLLER ASSY
STABILIZATION & CONTROL
TRANSLATION CONTROLLER

SIZE	CODE IDENT NO.	
B	26512	LDW300-21800 C

SCALE NONE — SHEET 1.00 OF 6

G 77.1 9-64

REVISIONS

CHANGE LTR	ITEM NO.	SHEET NO.	ZONE	GRUMMAN INFO ONLY	DET SPEC	CLASS I	CLASS II	ENGRG ORDER	DESCRIPTION	EFFECTIVITY	DISPOSITION OF EXISTING PARTS		CHANGED BY AND DATE	ENGRG APPD	GOVT APPD
											REWORK	SCRAP			
C	1	1.00, 1.11, 2.00, 2.01 & 3.00						EO C1	ON -1 & -3, IN FLD & B/M ADDED (SEE NOTE 11b) TO AN960C816L. ADDED -13 ON -3 ASSY. ADDED (FOR -1 ASSY) TO -11 CALLOUT. ON SH. 3.00 ADDED NOTES 5e, 9d, 11b & 12. DELETED NOTE 9c. IN TABLE I DELETED (REF.) FROM X-X AXIS THROW. ADDED (SEE NOTE 12) TO HARDSTOP FORCE & X-X AXIS THROW. REMOVED -11 FROM -3 ASSY. ADDED SH. 1.11	LTA-1 (11), CRIT. ENVIR. TEST, MIT. LAB (SEE NOTE 1) LMS-1-2, FMES, DMSM	V		F. PEPE 6/15/66		
	2	3.00							REF. EO C1: NOTE 9e WAS 9d. IN TABLE I, ADDED "ON-OFF" TO SWITCH ACTUATION POINT.		NOT REQ'D				
	3	3.00							REVISED NOTE #8: ADDED "PER LSP-14-22601"		V				
	4	1.00, 2.00 2.01, 3.00							ADDED -5 ASSY, EFF FOR MSC LAB. ADDED NOTE 13. ADDED LDW-21800-15, LDW300-11812-21, LDW390-21296-1 FOR -5 ASSY.	MSC LAB SEE NOTE 13	NOT	REQD	G. KAMMERER 7-6-66		
	5	3.00							REF EO C1, NOTE 5e WAS "NAMEPLATE LDW 300-21800-13 FOR -3 ASSY, SAME AS -11 EXCEPT PART Nº 15-21800-3."						
	6	3.00							IN NOTE 9, AFTER "CONTROL ARM," ADDED "& FRICTION FORCE SETTING OF 1½ LB." IN NOTE 9e, "ON-3 & -5 ASSY" WAS "ON-3 ASSY." SWITCH ACTUATION POINT FOR X-X & Y-Y AXIS ".187-.437 IN." WAS ".187-.375 IN."	NOTED	NOT	REQD			
	7.								(R) -1 MAY BE REWORKED TO MAKE -5. JG	NOTED	NOTED				

FOR CONTINUATION OF REVISIONS SEE SHEET _____

GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO.		
B	26512	LDW300-21800	C
SCALE NONE			SHEET 1.11

ENG 77.3 5-65

QTY PER ASSEMBLY			PART NO.	I&T	CODE IDENT	NOMENCLATURE OR DESCRIPTION	MATERIAL	GOVT SPEC	COML SPEC	STOCK SIZE	PROCESS SYM	FINISH NO.	ZONE
1	1	1	LDW300P11816-1	E		HANDLE	SEE DWG						7B
1	1	1	LDW300P11807-3			WASHER							4B
1	1	1	LDW300M11893-1			SPACER							7C
1	1	1	LDW300M11877-1			RETAINER							4B
1	1	1	LDW300M11876-5			PIN							6B
1	1	1	LDW300M11876-1			PIN							7B
1	1	1	LDW300M11863-1			KNOB							6B
1	1	1	LDW300M11853-1			DETENT							4B
2	2	2	LDW300M11811-1			PIVOT							4B
1	1	1	LDW300M11809-1			PLUG							4B
1			LDW300-11812-21			BOOT							4B
	1	1	LDW300-11812-19			BOOT							4B
1	1	1	LDW300-11808-13			SEAL							6B
1	1	1	LDW300-11808-11			SEAL							3A
1	1	1	LDW300-11807-17			RETAINER							7B
1	1	1	LDW300-21809-1			HANDLE ASSY							4B
1	1	1	LDW300-21801-9			COVER							4B
1	1	1	LDW300-21801-3			BOX ASSY							4C
1	1	1	LDW300-21801-1			COVER ASSY							7B
1			LDW390-21296-1			CONTROLLER ASSY (ELECTRICAL)							7B
	1		LDW390-21056-3			CONTROLLER ASSY (ELECTRICAL)							7B
		1	LDW390-21056-1			CONTROLLER ASSY (ELECTRICAL)	SEE DWG						7B
1			LDW300-21800-15			NAMEPLATE	MAKE FROM GNIID-1				NONE	SEE NOTE 6	4C
	1		LDW300-21800-13			NAMEPLATE	MAKE FROM GNIID-1					SEE NOTE 5	4C
		1	LDW300-21800-11	E		NAMEPLATE	MAKE FROM GNIID-1					SEE NOTE 5	4C
			LDW300-21800-5	S		CONTROLLER ASSY						NONE	
			LDW300-21800-3	S		CONTROLLER ASSY						NONE	
			LDW300-21800-1	S		CONTROLLER ASSY.					NONE	NONE	
-5	-3	-1											

SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC

I&T: IDENTIFICATION AND TRACEABILITY IN ACCORDANCE WITH LPC-19-2 (GRUMMAN) LPC-19-3 (VENDOR)

GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO.		
B	26512	LDW300-21800	C

SCALE NONE SHEET 2.00

ENG 77.2 5-64

QTY PER ASSEMBLY			PART NO.	I&T	CODE IDENT	NOMENCLATURE OR DESCRIPTION	MATERIAL	GOVT SPEC	COML SPEC	STOCK SIZE	PROCESS SYM	FINISH NO.	ZONE
AS	REQD		RTV-731	E		ADHESIVE	(SEE NOTE 8)						
4	4	4	NAS1218-08CR-3B			SCREW	STD. PART	(SEE NOTE 11)					
18	18	18	NAS1218-08CR-2B			SCREW		(SEE NOTE 11)					7B
2	2	2	NAS1202-6			SCREW							4B
1	1	1	NAS1202-3			SCREW							4B
1	1	1	NAS1081C08A6L			SCREW							4B
AS	REQD		MS20995C20			LOCK WIRE							4B
1	1	1	MS21042-L4			NUT							6B
1	1	1	MS21042-L3			NUT							7B
✓	✓	✓	MS20470-AD4			RIVET							4C
1	1	1	MS16628-4050			RING							6B
1	1	1	MS19059-16			BALL							3B
1	1	1	AN960C816L			WASHER (SEE NOTE 11b)							6B
1	1	1	AN960D516L			WASHER							7C
1	1	1	AN960D416L			WASHER							6B
1	1	1	AN960D10L			WASHER							7B
26	26	26	AN960D8L			WASHER							
4	4	4	AN525-832-7	E		SCREW	STD. PART						4C
-5	-3	-1											

SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC

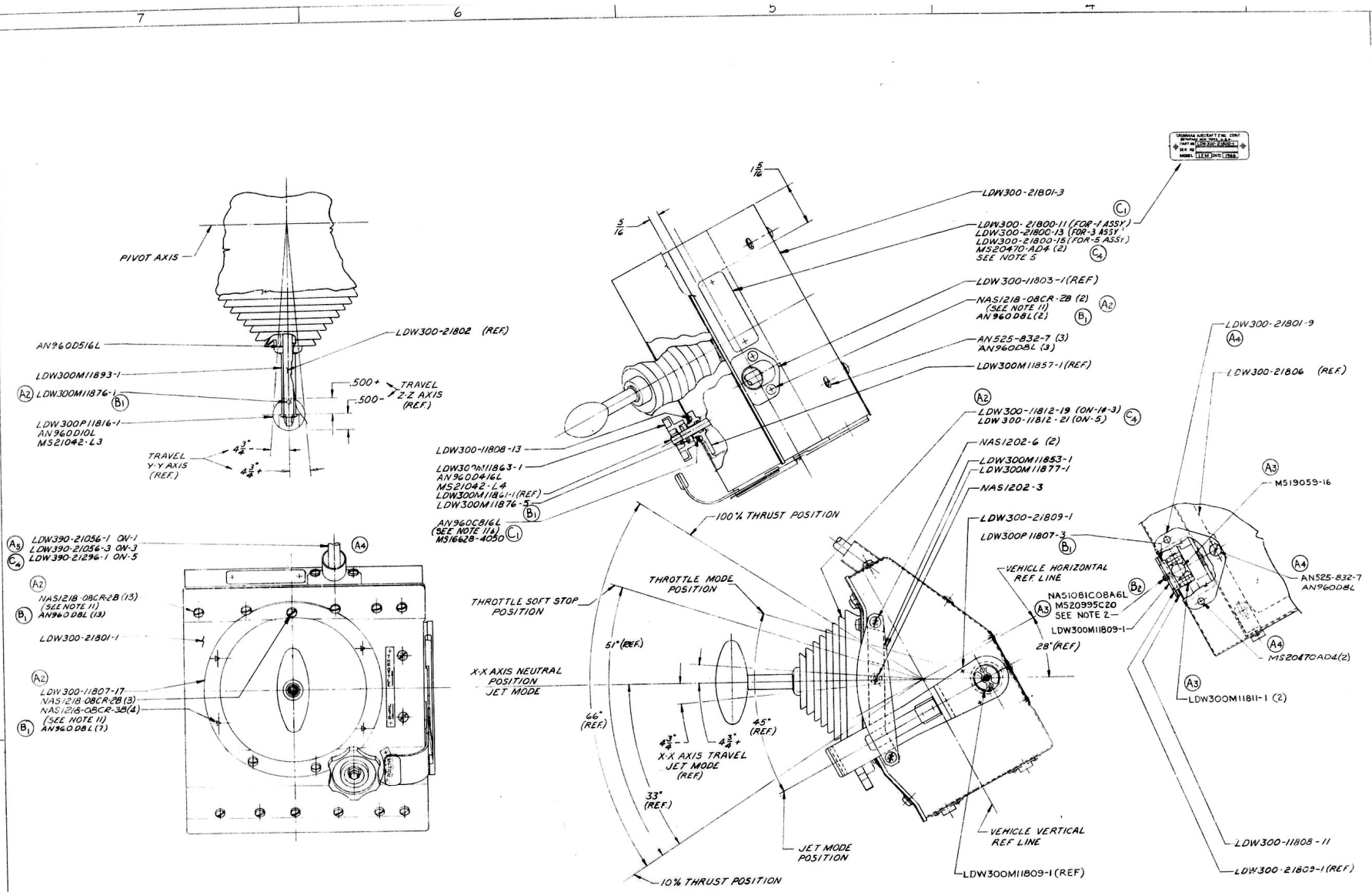
I & T: IDENTIFICATION AND TRACEABILITY IN ACCORDANCE WITH _____

GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO.		
B	26512	LDW300-21800	C

SCALE NONE SHEET 2:01

FORM 77.2 5-64



NOTES:
1. DELIVER TO I.A.I.T. C
(LTR BG54 65-9
2. INSTALL
WITH MS33540.
3. DURING ASSEMBLY
THAT ALL BURRS,
ARE REMOVED.
4. DO NOT USE GRE
CONTROLLER.
5. a. NAMEPLATE PR
SNIAC, TYPE 3.
b. ENGRAVE LETTE
c. CENTRALIZE A
d. SERIAL NUMBER
CONSECUTIVE NU
INCLUSIVE, EACH O
e. NAMEPLATES -13 &
6. AFTER THE CONTR
OPERATION OF ALL
AND MODE CHANGE
EVIDENCE OF STIC
LEAST TEN (10) TIM
7. INSTALL HANDLE
PIVOTS & BALL AS S
INSTALL PLUG UNT
SCREW UNTIL IT C
THERE IS NO RELA
DRILL #36 (.1065 .05
PLUG. REASSEMBLE
8. APPLY RTV-731 (L
SIDE OF ELBOW,
9. CONTROLLER PERFO
VERIFIED BY MEAN
CONTROLLER ASSY
IS TO BE LEFT OFF
BOOT LDW300-21(8)
ALL MEASURE MEM
& FRICTION FORCE
a. CYCLE EACH AXIS
EACH DIRECTION, R
AND AT 100% OF ST
SHALL BE WITHIN
b. IF THE AVERAGE A
IS TO BE REWORKE
d. NEUTRAL POSITION SE
AS A RESULT OF TOLER
RESULTANT OF ELECTR
PRELOAD AS GRAPHIC
BAND IS THE DISTANC
LINE RUNS AS MEAS
e. CONTROLLER PERFORMA
BY USE OF EQUIPMENT
#-5 ASSY. AN ACCEPT
REPORT LPC 902-43
THE DATA ON DWG. TA

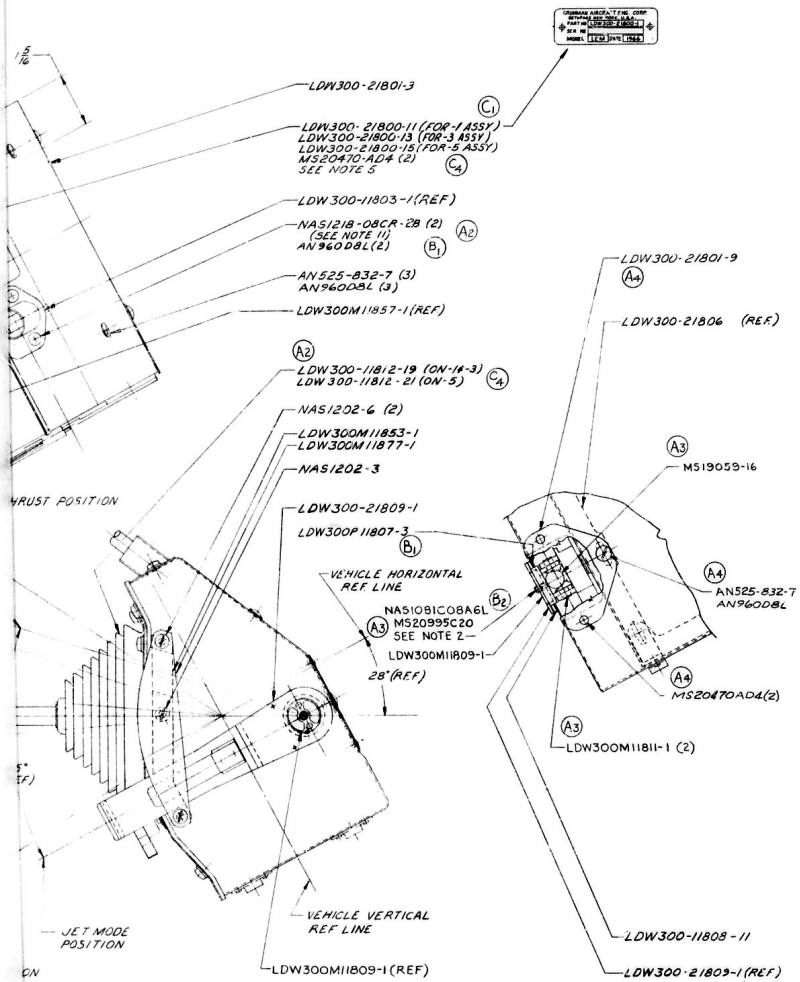
TABLE

	THROTTLE
FRICTION FORCE RANGE	MIN. 3/4 - SET AT
SOFT STOP FORCE	3 1/2 - 8
VOLTAGE	.5T - .5I V
THROTTLE POSITION (REF.)	0° DOWN STOP
THROTTLE RANGE	
SOFT STOP RANGE (REF.)	
JET MODE (X-X, Y-	
BREAKOUT FORCE (PRELOAD)	
HARDSTOP FORCE (SEE NOTE	
SWITCH ACTUATION POINT (ON	
NEUTRAL POSITION SLOP (X-X &	
X-X AXIS THROW (SEE NOTE 4)	
Y-Y AXIS THROW	
Z-Z AXIS THROW (REF.)	

LDW300-21800-1
TRANSLATION CONTROLLER ASSY
LDW300-21800-3
LDW300-21800-5 (SAME AS-1 EXCEPT AS NOTED)

CODE IDENT NO. 26512
LDW300-21800 SH 3.00

NAS 9-1100



NOTES:

1. DELIVER TO M.I.T., CAMBRIDGE, MASS. AS AUTHORIZED BY CCA31 (LTR BG54 '65-97)
2. INSTALL SAFETY WIRE IN ACCORDANCE WITH MS33540.
3. DURING ASSEMBLY AND/OR DISASSEMBLY, INSPECT TO INSURE THAT ALL BURRS, CHIPS, FOREIGN MATTER, GREASE OR OIL ARE REMOVED.
4. DO NOT USE GREASE OR OIL ON ANY COMPONENTS OF THIS CONTROLLER.
5. a. NAMEPLATE PROTECTIVE COATING IN ACCORDANCE WITH GN11AC, TYPE 3.
   b. ENGRAVE LETTERING (3/32 HIGH) APPROX. AS SHOWN.
   c. CENTRALIZE ALL LETTERING.
   d. SERIAL NUMBERS TO BE AS FOLLOWS: CONSECUTIVE NUMBERS FROM 004 TO 017 & 036 TO 063 (FOR-5) INCLUSIVE, EACH ON A SEPARATE NAMEPLATE.
   e. NAMEPLATES -138-15, ARE IDENTICAL TO -11 EXCEPT FOR ASSY PART NO.
6. AFTER THE CONTROLLER HAS BEEN ASSEMBLED, CHECK OPERATION OF ALL AXES IN JET MODE, ALSO THROTTLE MODE AND MODE CHANGER HANDLE, FOR FREEDOM OF MOTION WITHOUT EVIDENCE OF STICKING OR BINDING. CYCLE FULL STROKE AT LEAST TEN (10) TIMES FOR EACH COMPONENT.
7. INSTALL HANDLE, LDW300-21809, & ASSOCIATED PARTS. INSERT PIVOTS & BALL AS SHOWN (MAKE SURE PIVOTS ARE FULLY SEATED). INSTALL PLUG UNTIL IT BOTTOMS IN HANDLE & THEN INSTALL SET SCREW UNTIL IT CONTACTS THE BALL. REMOVE PLUG, MAKING SURE THERE IS NO RELATIVE MOTION BETWEEN IT & THE SET SCREW. DRILL #36 (0.1065-0.1050) HOLE IN SET SCREW THRU EXISTING HOLE IN PLUG. REASSEMBLE & LOCKWIRE.
8. APPLY RTV-731 (LSM-14-4112) ADHESIVE ON CONTACT SIDE OF ELBOW, ACCESS PLATE & BOOT AS PER LSP-14-22601.

FUNCTIONAL TEST PROCEDURE:

9. CONTROLLER PERFORMANCE CHARACTERISTICS MAY BE VERIFIED BY MEANS OF X-Y RECORDER GRAPHICAL READINGS. THE CONTROLLER ASSY. MUST BE COMPLETE EXCEPT THAT HANDLE IS TO BE LEFT OFF UNTIL ALL MEASUREMENTS ARE COMPLETED. BOOT LDW300-11812 MAY BE OMITTED ON-1 ASSY. VERSION. ALL MEASUREMENTS ARE BASED ON A 6 INCH RADIUS CONTROL ARM & FRICTION FORCE SETTING OF 1½ LB.
   a. CYCLE EACH AXIS A MINIMUM OF (3) TIMES FOR 100% OF STROKE IN EACH DIRECTION, RECORDING PRELOAD AT START, OR MID-POSITION, AND AT 100% OF STROKE. THE AVERAGE FORCES AND DISPLACEMENTS SHALL BE WITHIN THE LIMITS SHOWN IN TABLE I.
   b. IF THE AVERAGE READINGS ARE NOT WITHIN TOLERANCE, THE UNIT IS TO BE REWORKED AND ITEM 9a. REPEATED.
   d. NEUTRAL POSITION SLOP IS THE AMOUNT OF SHAFT MOTION THAT OCCURS AS A RESULT OF TOLERANCES IN LINKAGE JOINTS. IT DOES NOT INCLUDE RESULTANT DEFLECTION REQ'D TO OVERCOME LINKAGE FRICTION AND SPRING PRELOAD. AS GRAPHICALLY SHOWN ON THE X-Y RECORDER, THE SLOP BAND IS THE DISTANCE BETWEEN THE POSITIVE AND NEGATIVE DIRECTION LINE RUNS AS MEASURED AT NEUTRAL, NO-LOAD CONDITIONS.
   e. CONTROLLER PERFORMANCE CHARACTERISTICS AS SHOWN IN TABLE I ARE TO BE VERIFIED BY USE OF EQUIPMENT & PROCEDURES AS SPECIFIED IN REPORT LPC 902-46001. ON-3 & -5 ASSY, AN ACCEPTANCE TEST IS TO BE PERFORMED AS SPECIFIED IN REPORT LPC 902-43001. (IN THE EVENT OF CONFLICT BETWEEN DWG. & REPORT, THE DATA ON DWG. TABLE I IS TO BE USED)
10. SET THROTTLE FRICTION FORCE AT 1.5 LB. ± .5 LB IN ACCORDANCE WITH LDW300-21806.
11. NAS1218-08CR SCREWS MAY BE REPLACED WITH AN525-832 SCREWS OF EQUIVALENT LENGTH.
    a. NAS1202 SCREWS MAY BE REPLACED WITH AN509C8R SCREWS OF EQUIVALENT LENGTH.
    b. AN960C816L WASHER MAY BE REPLACED WITH AN960D816L.
12. MAXIMUM FORCE FOR X-X AXIS TRAVEL IS TO BE VERIFIED AT CUT-OFF THROW OF 5 1/4", AS SHOWN GRAPHICALLY ON X-Y RECORDER. DO NOT USE THE TRUE HARDSTOP POSITION.
13. AUTHORIZED BY CCA 237 (LTR BG54-66-287).

TABLE I

THROTTLE MODE			
FRICTION FORCE RANGE	MIN ¾ - 1 LB ; MAX 3 ± ½ LB. SET AT 1½ ± ½ LB		
SOFT STOP FORCE	5½ - 8 LB AT 1½ LB FRICTION SETTING		
VOLTAGE	.57-.51 V	1.65-1.42 V	3.15-2.85 V
THROTTLE POSITION (REF)	0° DOWN STOP	51°36' SOFT STOP	64° UP STOP
THROTTLE RANGE	64°-68°		
SOFT STOP RANGE (REF)	80°-87° (REF)		

JET MODE (X-X, Y-Y AXIS)		Z-Z AXIS
BREAKOUT FORCE (PRELOAD)	2.50 - 1.25 LB	2.75 - 1.75 LB
HARDSTOP FORCE (SEE NOTE 12)	4.50 - 2.25 LB.	7.25 - 4.25 LB
SWITCH ACTUATION POINT (ON-OFF)	.187 - .437 IN.	.187 - .375 IN.
NEUTRAL POSITION SLOP (X-X & Y-Y ONLY)	0.1 IN MAX	.015 MAX.
X-X AXIS THROW (SEE NOTE 12)	± (4 ⅝ TO 6°)	
Y-Y AXIS THROW	± (4 ⅝ TO 5 ⅛)	
Z-Z AXIS THROW (REF)	± (4.50 TO 5.50 IN) (REF)	

LDW300-21800-1
VSLATION CONTROLLER ASSY.
LDW300-21800-3
LDW300-21800-5 (SAME AS-1 EXCEPT AS NOTED)

02/02 NAS 9-1100

CODE IDENT NO.	SIZE	
26512	J	LDW300-21800 C

SCALE FULL — SHEET 3.00

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L. I., N.Y.

LEM — MODEL

CODE IDENT NO. 26512 | LDW300-21800 | SH 3.00

LDW300-21800 C

DWG SIZE 24 x 11 — FULL SIZE SHEET AREA (1/4 OF FULL) 18.3 SQ FT — 1/8 SIZE SHEET AREA (1/4 OF FULL) 4.6 SQ FT — PRINT TRIM LINE

MODEL OR END ITEM	NEXT ASSY	MODULE OR SER NO.	REQD PER MODULE OR END ITEM
LEM	—	LMS-2	1
LEM	—	LMS-1	1

PART NO. LDW300-21800-7

MODEL OR END ITEM	NEXT ASSY	MODULE OR SER NO.	REQD PER MODULE OR END ITEM
LEM	—	MSC LAB T&SUB SEE NOTE 13	1

PART NO. LDW300-21800-5

MODEL OR END ITEM	NEXT ASSY	MODULE OR SER NO.	REQD PER MODULE OR END ITEM
LEM	—	FMES	2
	—	DMSM	1
LEM	—	M.I.T. LAB SEE NOTE 1	2

PART NO. LDW300-21800-3

MODEL OR END ITEM	NEXT ASSY	MODULE OR SER NO.	REQD PER MODULE OR END ITEM
LEM	—	CRIT. ENVIR TEST	2
LEM	LDW340-21215	LTA-1(11)	2

PART NO. LDW300-21800-1 GAEC SCH NO. 34

(5)

SH REV STATUS: FOR DESCRIPTION OF REV SEE SUBQ SH									
SHEET	1.00	1.10	1.11	2.00	201	3.00			
REV	D	B	D	D	D	D			
SHEET									
REV									
SHEET									
REV									

LAST SECT LTR USED	—
LAST DASH NO. USED	-7

GRUMMAN REL INFO D
PRIM NO. 4(003)
257 mp 160-9/16/1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCE UNLESS SPECIFIED
FRACTIONS - DECIMALS - ANGLES
± 1/64 ±.010 ± 1/4°

ORIG DWG AUTH	
DETAIL SPEC REQUIREMENT	✓
CLASS II ENGRG CHANGE	
CLASS I ENGRG CHANGE	

CONTRACT NO. NAS9-1100 LINE ITEM 2 DOCUMENTATION TYPE II

DRAWN BY	G. KAMMERER 11-11-65	WEIGHTS	J. Berry 11-12-65
LAYOUT BY		RELIABILITY	T.S. Doyle for J.H. 11/12
CHECKED BY	J. OTERO 11/12/65		
GRP. LEADER	[signature] 11/12/65		
STRUCTURES	W. FEB 11/12/65	PROJ ENGR	[signature] 11/18
STRUCTURES	[signature] 11-12	REL GROUP	[signature] 11/20

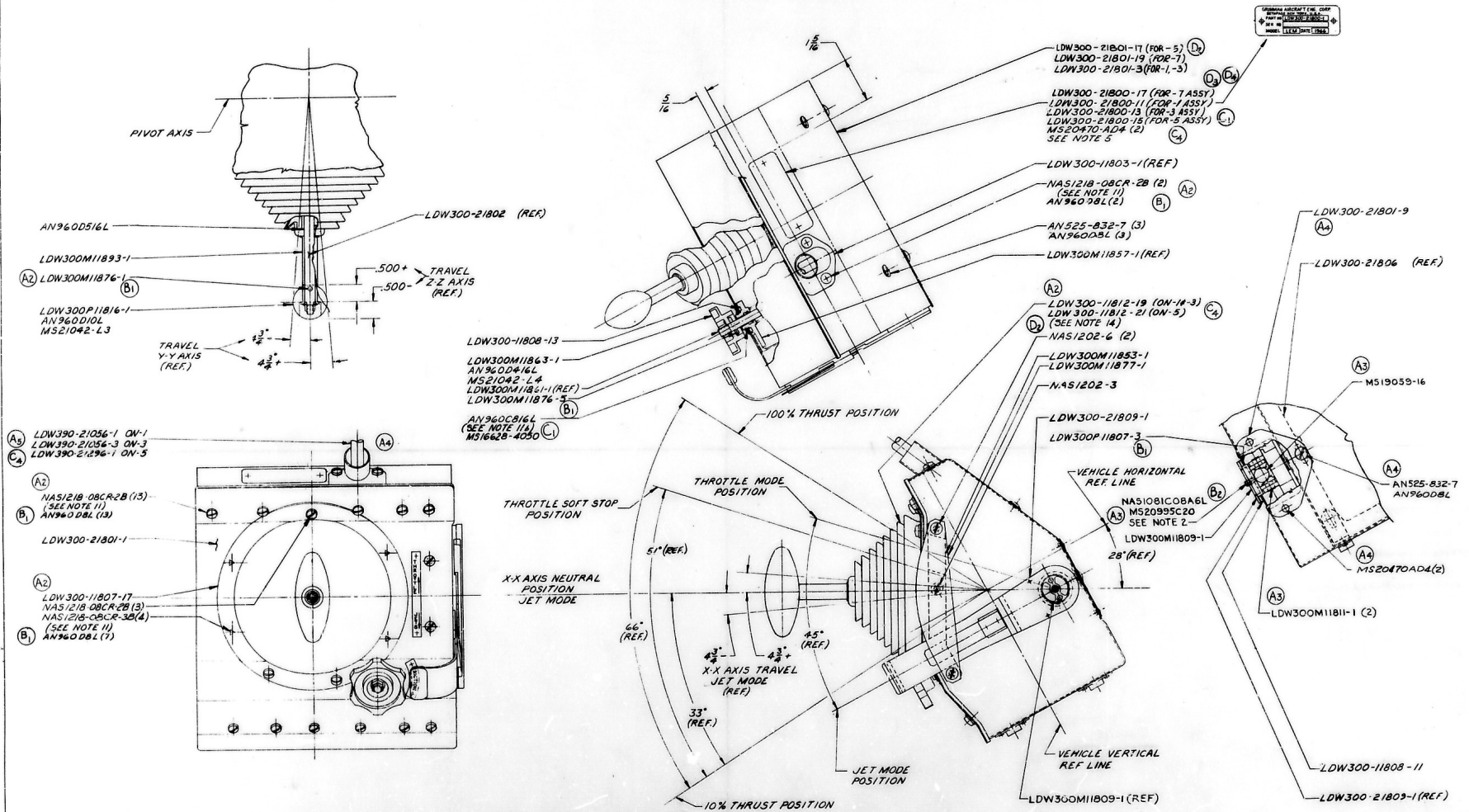
(1) GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L. I., NEW YORK

CONTROLLER ASSY
STABILIZATION & CONTROL
TRANSLATION CONTROLLER

SIZE	CODE IDENT NO.	
B	26512	LDW300-21800 D

SCALE NONE SHEET 1.00 OF 6

ENG 77.1 9-64



NOTES:
1. DELIVER TO M.I.T. CAMBRID
(LTR BG54 65-97)

2. INSTALL
WITH MS33540.

3. DURING ASSEMBLY AND/O
THAT ALL BURRS, CHIPS,
ARE REMOVED.

4. DO NOT USE GREASE OR
CONTROLLER.

5. a. ~~NAMEPLATE PROTECTI~~
~~GN11AC, TYPE 3~~
b. ENGRAVE LETTERING (
c. CENTRALIZE ALL LE
d. SERIAL NUMBERS TO B
CONSECUTIVE NUMBERS
INCLUSIVE, EACH ON A SE
e. NAMEPLATES, -13 & -15, ARE
6. AFTER THE CONTROLLER
OPERATION OF ALL AXES
AND MODE CHANGER HAND
EVIDENCE OF STICKING O
LEAST TEN (10) TIMES FOR

7. INSTALL HAND, E. LDW300
PIVOTS & BALL AS SHOWN (
INSTALL PLUG UNTIL IT B
SCREW UNTIL IT CONTACT
THERE IS NO RELATIVE MO
DRILL .156(.045-.050) HOLE
PLUG. REASSEMBLE & LOC

8. APPLY RTV-731 (LSM-14-4
SIDE OF ELBOW, ACCESS

FUNCTION
9. CONTROLLER PERFORMANC
VERIFIED BY MEANS OF X-
CONTROLLER ASSY. MUST
IS TO BE LEFT OFF UNTIL
BOOT LDW300-11812
ALL MEASUREMENTS ARE
FRICTION FORCE SETTIN
a. CYCLE EACH AXIS A MINIM
EACH DIRECTION, RECORDI
AND AT 100% OF STROKE. T
SHALL BE WITHIN THE LIM
b. IF THE AVERAGE READING
IS TO BE REWORKED AND

d. NEUTRAL POSITION SLOP IS THE
AS A RESULT OF TOLERANCES
RESULTANT DEFLECTION REQU
PRELOAD. AS GRAPHICALLY SH
BAND IS THE CYCLANCE BETW
LINE RUNS AS MEASURED AT
e. CONTROLLER PERFORMANCE CHAR
BY USE OF EQUIPMENT & PROCE
#-5 ASSY, AN ACCEPTANCE T
REPORT LPC 902 4300L (IN
THE DATA ON DWG. TABLE I IS

TABLE I

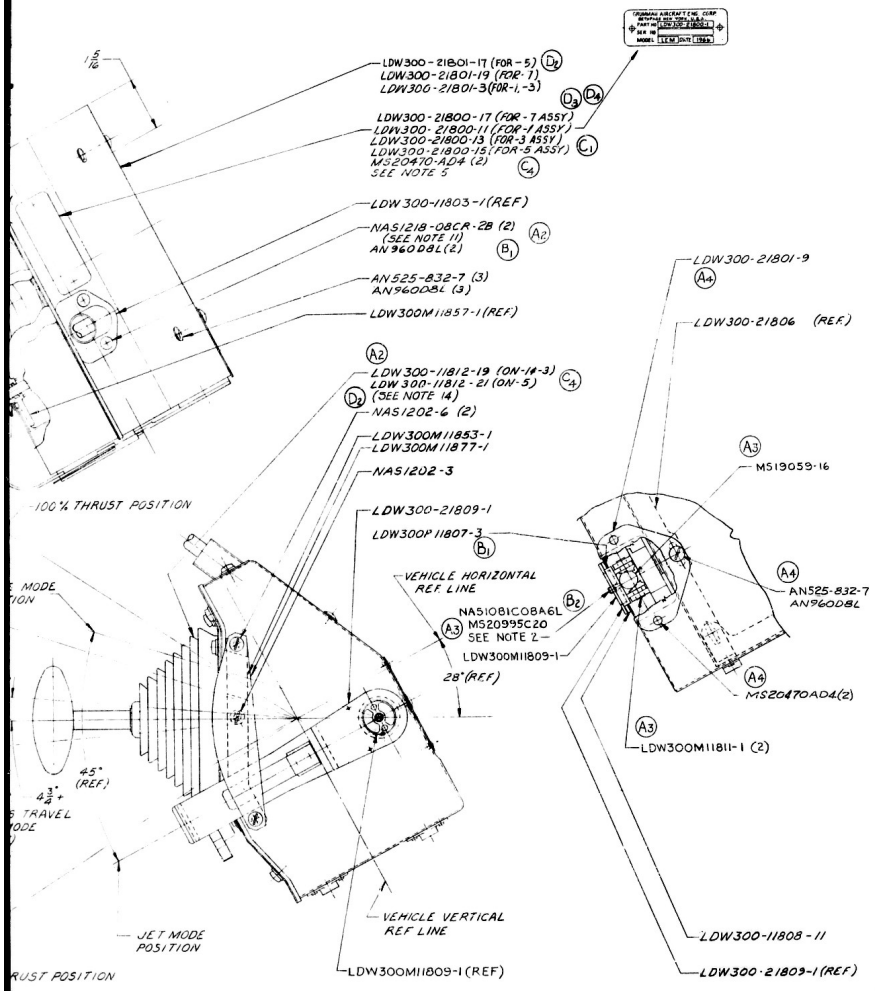
	THROTTLE MODE	
FRICTION FORCE RANGE	MIN. 1/2 - 1 LB ; MA SET AT 1 1/2 ± 1/2 L	
SOFT STOP FORCE	3 1/2 - 8 LB AT 1/2 LB FRICT	
VOLTAGE	.57 - .11 V	1.65-1.8
THROTTLE POSITION (REF.)	0° DOWN STOP	51° SOFT S
THROTTLE RANGE	64° - 6	
SOFT STOP RANGE (REF.)	50° - 57	
JET MODE (X-X, Y-Y AXIS)		
BREAKOUT FORCE (PRELOAD)		
HARDSTOP FORCE (SEE NOTE 12)		
SWITCH ACTUATION POINT	(ON-OFF)	
NEUTRAL POSITION SLOP (-X&Y-Y ONLY)		
X-X AXIS THROW (SEE NOTE 4)	± (4 1/8 TO	
Y-Y AXIS THROW	± (4 1/8 TO	
Z-Z AXIS THROW (REF.)	± (.4 30 T	

01/02 NAS 9-1100

LDW300-21800-1
TRANSLATION CONTROLLER ASSY.

LDW300-21800-3 (SAME AS -1 EXCEPT AS NOTED)
LDW300-21800-5
LDW300-21800-7 (SAME AS -3 EXCEPT AS NOTED) (D5)

CODE IDENT NO. 26512	SH
LDW300-21800	3.00



NOTES:

1. DELIVER TO M.I.T., CAMBRIDGE, MASS. AS AUTHORIZED BY CCA 31 (LTR BG54-65-97)
2. INSTALL SAFETY WIRE IN ACCORDANCE WITH MS33540.
3. DURING ASSEMBLY AND/OR DISASSEMBLY, INSPECT TO INSURE THAT ALL BURRS, CHIPS, FOREIGN MATTER, GREASE OR OIL ARE REMOVED.
4. DO NOT USE GREASE OR OIL ON ANY COMPONENTS OF THIS CONTROLLER.
5. a. ~~NAMEPLATE PROTECTIVE COATING IN ACCORDANCE WITH AN-1-AC, TYPE 3~~
   b. ENGRAVE LETTERING (3/32 HIGH) APPROX. AS SHOWN.
   c. CENTRALIZE ALL LETTERING.
   d. SERIAL NUMBERS TO BE AS FOLLOWS:
   CONSECUTIVE NUMBERS FROM 004 TO 017 & 056 TO 063 (FOR-5) INCLUSIVE, EACH ON A SEPARATE NAMEPLATE.
   e. NAMEPLATES, -13 & -15, ARE IDENTICAL TO -11 EXCEPT FOR ASSY PART NO.
6. AFTER THE CONTROLLER HAS BEEN ASSEMBLED, CHECK OPERATION OF ALL AXES IN JET MODE, ALSO THROTTLE MODE AND MODE CHANGER HANDLE, FOR FREEDOM OF MOTION WITHOUT EVIDENCE OF STICKING OR BINDING. CYCLE FULL STROKE AT LEAST TEN (10) TIMES FOR EACH COMPONENT.
7. INSTALL HANDLE: LDW300-21809 -1 & ASSOCIATED PARTS. INSERT PIVOTS & BALL AS SHOWN (MAKE SURE PIVOTS ARE FULLY SEATED). INSTALL PLUG UNTIL IT BOTTOMS IN HANDLE & THEN INSTALL SET SCREW UNTIL IT CONTACTS THE BALL. REMOVE PLUG, MAKING SURE THERE IS NO RELATIVE MOTION BETWEEN IT & THE SET SCREW. DRILL #56 (.045-.050) HOLE IN SET SCREW THRU EXISTING HOLE IN PLUG. REASSEMBLE & LOCKWIRE.
8. APPLY RTV-731 (LSM-14-4112) ADHESIVE ON CONTACT SIDE OF ELBOW, ACCESS PLATE & BOOT AS PER LSP-14-22601.

FUNCTIONAL TEST PROCEDURE

9. CONTROLLER PERFORMANCE CHARACTERISTICS MAY BE VERIFIED BY MEANS OF X-Y RECORDER GRAPHICAL READINGS. THE CONTROLLER ASSY. MUST BE COMPLETE EXCEPT THAT HANDLE IS TO BE LEFT OFF UNTIL ALL MEASUREMENTS ARE COMPLETED. BOOT LDW300-11812 MAY BE OMITTED ON -1 ASSY. VERSION. ALL MEASUREMENTS ARE BASED ON A 6 INCH RADIUS CONTROL ARM & FRICTION FORCE SETTING OF 1½ LB.
   a. CYCLE EACH AXIS A MINIMUM OF (3) TIMES FOR 100% OF STROKE IN EACH DIRECTION, RECORDING PRELOAD AT START OR MID-POSITION, AND AT 100% OF STROKE. THE AVERAGE FORCES AND DISPLACEMENTS SHALL BE WITHIN THE LIMITS SHOWN IN TABLE I.
   b. IF THE AVERAGE READINGS ARE NOT WITHIN TOLERANCE, THE UNIT IS TO BE REWORKED AND ITEM 9a. REPEATED.
   d. NEUTRAL POSITION SLOP IS THE AMOUNT OF SHAFT MOTION THAT OCCURS AS A RESULT OF TOLERANCES IN LINKAGE JOINTS. IT DOES NOT INCLUDE RESULTANT DEFLECTION REQ'D TO OVERCOME LINKAGE FRICTION AND SPRING PRELOAD, AS GRAPHICALLY SHOWN ON THE X-Y RECORDER. THE SLOP BAND IS THE DISTANCE BETWEEN THE POSITIVE AND NEGATIVE DIRECTION LINE RUNS AS MEASURED AT NEUTRAL, NO-LOAD CONDITIONS.
   e. CONTROLLER PERFORMANCE CHARACTERISTICS AS SHOWN IN TABLE I ARE TO BE VERIFIED BY USE OF EQUIPMENT & PROCEDURES AS SPECIFIED IN REPORT LPC 902-46001. ON -3 & -5 ASSY, AN ACCEPTANCE TEST IS TO BE PERFORMED AS SPECIFIED IN REPORT LPC 902-43001. (IN THE EVENT OF CONFLICT BETWEEN DWG. & REPORT, THE DATA ON DWG. TABLE I IS TO BE USED)
10. SET THROTTLE FRICTION FORCE AT 1.5 LB ± .5 LB IN ACCORDANCE WITH LDW300-21806.
11. NAS1218-08CR SCREWS MAY BE REPLACED WITH AN525-832 SCREWS OF EQUIVALENT LENGTH.
    a. NAS1202 SCREWS MAY BE REPLACED WITH AN509C8R SCREWS OF EQUIVALENT LENGTH.
    b. AN960C816L WASHER MAY BE REPLACED WITH AN960D816L.
12. MAXIMUM FORCE FOR X-X AXIS TRAVEL IS TO BE VERIFIED AT CUT-OFF THROW OF 5 3/4"; AS SHOWN GRAPHICALLY ON X-Y RECORDER. DO NOT USE THE TRUE HARDSTOP POSITION.
13. AUTHORIZED BY CCA 237 (LTR BG54-66-287).
14. THE FOLLOWING PARTS ARE INTERCHANGEABLE & SHALL BE USED FOR FUTURE REPLACEMENT'S & SPARES:
    LDW300-21800-5 INTERCHANGEABLE WITH { LDW300-21800-3 / LDW300-21800-1 }
    LDW300-11812-21 " " LDW300-11812-19

TABLE I

THROTTLE MODE			
FRICTION FORCE RANGE	MIN. ½ - 1 LB; MAX. 3 ± ½ LB. SET AT 1½ ± ½ LB		
SOFT STOP FORCE	3½ - 8 LB AT 1½ LB FRICTION SETTING.		
VOLTAGE	.57-.51 V	1.65-1.42 V	3.15-2.85 V
THROTTLE POSITION (REF)	0° DOWN STOP	51°54' SOFT STOP	66° UP STOP
THROTTLE RANGE	64°-68°		
SOFT STOP RANGE (REF)	50°-57° (REF)		

JET MODE (X-X, Y-Y AXIS)		
		E-E AXIS
BREAKOUT FORCE (PRELOAD)	2.75 - 1.25 LB	2.75 - 1.75 LB
HARDSTOP FORCE (SEE NOTE 12)	2.50 - 2.25 LB.	2.25-4.75 LB
SWITCH ACTUATION POINT (ON-OFF)	.187 - .437 IN.	.187-.375 IN.
NEUTRAL POSITION SLOP (X-X, Y-Y ONLY)	0.1 IN MAX	.015 MAX.
X-X AXIS THROW (SEE NOTE 12)	± (4 3/4" TO 6")	
Y-Y AXIS THROW	± (4 3/4" TO 5 3/16")	
E-E AXIS THROW (REF)	± (4.50 TO 5.50 IN) (REF)	

02/02 NAS 9-1100

LDW300-21800-1
TRANSLATION CONTROLLER ASSY.
LDW300-21800-3 (SAME AS -1 EXCEPT AS NOTED)
LDW300-21800-5
LDW300-21800-7 (SAME AS -3 EXCEPT AS NOTED) D3

CODE IDENT NO.		SH
26512	LDW300-21800	3.00

GRUMMAN AIRCRAFT ENGRG CORP BETHPAGE, L. I., N.Y.			
CODE IDENT NO. 26512	SIZE J	LDW300-21800 D	
MODEL LEM	SCALE FULL	SHEET 3.00	

LDW300-21800 D
LDW300-21800 D

REVISIONS

CHANGE LTR	ITEM NO.	SHEET NO.	ZONE	SH CHG LTR	GRUMMAN INFO ONLY	DET SPEC	CLASS I	CLASS II	ENGRG ORDER	DESCRIPTION	EFFECTIVITY	DISPOSITION OF EXISTING PARTS: REWORK	DISPOSITION OF EXISTING PARTS: SCRAP	CHANGED BY AND DATE	ENGRG APPD	QUAL APPD
A	1	1.00								SH 1.00 OF 5 WAS SH 1.00 OF 4. ADDED SH 1.10	NOT REQD	NOT	REQD	G. KAMMERER 3/24/66	J.H.O.	
	2	2.00, 2.01 & 3.00	7B 4B 7B 4C							LDW300-11807-17 WAS -11, LDW300-11812-19 WAS -13, & LDW300M11876-5 WAS -1. DELETED NAS1218C08-1B(25), NAS1598-D08Y(31). ADDED NAS1218-08CR-2B(18) & NAS1218-08CR-3B(4).	NOTED	✓				
	3	2.00 2.01 & 3.00	4A 4B							REMOVED LDW300M11838-1, LDW300P11807-5(3), AN960-D8, AN320-C2, MS24665-153 ADDED LDW300M11811-1(2), LDW300M11809-1, NAS1081C08A6L, MS20995C32, MS19059-16.						
	4	2.01 & 3.00	4B							REMOVED AN525-832-7(2) ADDED MS20470AD4(2), AN960D8L(4) ADDED RTV-731 TO B/M						
	5									ADDED -3, LDW300-21056-3, NOTES #7 THRU #11, & TABLE I. RESTRICTED-1 TO LTA-1 & CRIT. ENVIR. TEST.						
B	1	2.00 & 3.00							EO B1	ON-1 & -3: LDW300M11876-5 WAS LDW300M11876-3; LDW300M11876-1 WAS LDW300M11876-5; ±(.450 TO .550 IN.) WAS ±(4.50 TO 5.50 IN.); AN960D8L QUAN 26 WAS 4, LDW300P11807-3, QUAN 1 WAS 2; IN NOTE 8: DELETE "PER LSP-14-22601", ADDED " & BOOT".	M.I.T. LAB SEE NOTE 1, CRIT. ENVIR. TEST, FMES, LTA-1(11), DMSM, LMS-1 LMS-2			F. DEPE 6/13/66		
	2	2.01 & 3.00							EO B2	ON-1 & -3: DELETE, "UNDER HEADS OF ALL EXTERIOR FASTENERS" FROM NOTE 8. ADDED NOTE 9d. IN FLD & B/M, MS20995C20 WAS MS20995C32. ADDED NOTE 11a; IN TABLE I: SOFT STOP FORCE 3½-8 LBS WAS 3½-4½ LBS. ADDED "Z-Z AXIS, .015 MAX." TO NEUTRAL POSITION SLOP.		✓				
	3	3.00							EO B3	ON-1 & -3: IN TABLE I, VOLTAGE - "1.65-1.42V" WAS "1.60-1.42V". THROTTLE POSITION (REF.), "51°-54° SOFT STOP" WAS "51° SOFT STOP." IN NOTE 9c, ADD, "OR LDW902-10002".		NOT	REQD			
	4								EO B4	SUPERSEDED BY EO B5						
	5	3.00							EO B5	ON-1 & -3: SUPERSEDES EO B4; IN TABLE I, ADDED COL. FOR Z-Z AXIS: BREAKOUT FORCE 2.75-1.75 LB. (WAS 2.50-1.25), HARDSTOP FORCE 7.25-4.25 LB. (WAS 4.50-2.25).		✓				

FOR CONTINUATION OF REVISIONS SEE SHEET 1.11

GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO.		
B	26512	LDW300-21800	B

SCALE NONE SHEET 1.10

ENG 77.3 5-64

REVISIONS

CHANGE LTR	ITEM NO.	SHEET NO.	ZONE	GRUMMAN INFO ONLY	DET SPEC	CLASS I	CLASS II	ENGRG ORDER	DESCRIPTION	EFFECTIVITY	DISPOSITION OF EXISTING PARTS: REWORK	DISPOSITION OF EXISTING PARTS: SCRAP	CHANGED BY AND DATE	ENGRG APPD	AGENCY APPD
C	1	1.00, 1.11, 2.00, 2.01 & 3.00						EO C1	ON-1 & -3, IN FLD & B/M ADDED (SEE NOTE 11b) TO AN960C816L. ADDED -13 ON -3 ASSY. ADDED (FOR-1 ASSY) TO-11 CALLOUT. ON SH. 3.00 ADDED NOTES 5e, 9d, 11b & 12. DELETED NOTE 9c. IN TABLE I DELETED (REF.) FROM X-X AXIS THROW. ADDED (SEE NOTE 12) TO HARDSTOP FORCE & X-X AXIS THROW. REMOVED -11 FROM -3 ASSY. ADDED SH. 1.11	LTA-1 (11), CRIT. ENVIR. TEST, MIT. LAB (SEE NOTE 1) LMS-1-2, FMES, DMSM	✓		F. PEPE 6/15/66		
	2	3.00							REF. EO C1: NOTE 9e WAS 9d. IN TABLE I, ADDED "ON-OFF" TO SWITCH ACTUATION POINT.		NOT REQ'D				
	3	3.00							REVISED NOTE #8: ADDED "PER LSP-14-22601"		✓				
	4	1.00, 2.00 2.01, 3.00							ADDED -5 ASSY, EFF FOR MSC LAB. ADDED NOTE 13, ADDED LDW-21800-15, LDW300-11812-21, LDW390-21296-1 FOR -5 ASSY.	MSC LAB SEE NOTE 13	NOT	REQD	G. KAMMERER 7-6-66		
	5	3.00							REF EO C1, NOTE 5e WAS "NAMEPLATE LDW300-21800-13 FOR -3 ASSY, SAME AS -11 EXCEPT PART Nº 1S-21800-3."						
	6	3.00							IN NOTE 9, AFTER "CONTROL ARM," ADDED "& FRICTION FORCE SETTING OF 1½ LB." IN NOTE 9e, "ON-3 & -5 ASSY." WAS "ON-3 ASSY." SWITCH ACTUATION POINT FOR X-X & Y-Y AXIS ".187-.437 IN." WAS ".187-.375 IN."	NOTED	NOT	REQD			
	7.								(R) IN -1 MOD. BLK, CRIT. ENVIR. TEST QUAN (2) WAS (3) -1 MAY BE REWORKED TO MAKE -5. JG	NOTED	NOTED				
D	1	3.00						EO D1	DELETED NOTE 5a = "NAMEPLATE PROTECTIVE COATING IN ACCORDANCE WITH GN11AC, TYPE 3."	FMES, LMS-2 LMS-1, MIT LAB (SEE NOTE 1) CRIT. ENVIR TEST, DMSM, LTA-1 (11) MSC LAB 1 & 5UB, SEE NOTE 13	NOT	REQD	F. DUCI 9-4-68		
	2	2.00, 3.00	3A					EO D2	ON-5 IN F/D & B/M ADDED LDW300-21801-17 DELETED LDW300-21801-3. ADDED NOTE 14. ADDED "SEE NOTE 14" IN F/D & B/M. BREAKOUT FORCE (TABLE 1) 2.75 - 1.25 LB WAS 2.50 - 1.25 LB.		✓				
	3	1, 2, 2.01 3.00	5A				✓	EO D3 LCD 2148	DELETE LDW300-21800-3 & -13 AND ADD LDW300-21800 -7 & -17 EFFECTIVITY FOR LMS #1 & 2; -7 MAY BE MADE BY REWORKING -3	LMS #2 LMS #1	NOTED				
	4	2.00, 3.00	4C				✓	LCD 2148	REF EO D3 IN FLD OF EO LDW 300-21800-19 FRAME ASSY SHOULD BE LDW300-21801-19 HOUSING ASSY	LMS #2 LMS #1	NOTED		H.D. 9.6.68	F. Culicchia 9-7-68	H.D.

FOR CONTINUATION OF REVISIONS SEE SHEET _____

GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO.		
B	26512	LDW300-21800	D (R)
SCALE NONE			SHEET 1.11

ENG 77.3 5-65

QTY PER ASSEMBLY -7	-5	-3	-1	PART NO.	I&T	CODE IDENT	NOMENCLATURE OR DESCRIPTION	MATERIAL	GOVT SPEC	COML SPEC	STOCK SIZE	PROCESS SYM	FINISH NO.	ZONE
1	1	1	1	LDW300P11816-1	E		HANDLE	SEE DWG						7B
1	1	1	1	LDW300F11807-3			WASHER							4B
1	1	1	1	LDW300M11893-1			SPACER							7C
1	1	1	1	LDW300M11877-1			RETAINER							4B
1	1	1	1	LDW300M11876-5			PIN							6B
1	1	1	1	LDW300M11876-1			PIN							7B
1	1	1	1	LDW300M11863-1			KNOB							6B
1	1	1	1	LDW300M11853-1			DETENT							4B
4	2	2	2	LDW300M11811-1			PIVOT							4B
1	1	1	1	LDW300M11809-1			PLUG	SEE DWG						4B
	1			LDW300-11812-21			BOOT	SEE NOTE 14						4B
1		1	1	LDW300-11812-19			BOOT	SEE NOTE 14						4B
1	1	1	1	LDW300-11808-13			SEAL	SEE DWG						6B
1	1	1	1	LDW300-11808-11			SEAL							3A
1	1	1	1	LDW300-11807-17			RETAINER							7B
	1			LDW300-21801-17			BOX ASSY							4C
1	1	1	1	LDW300-21809-1			HANDLE ASSY							4B
1	1	1	1	LDW300-21801-9			COVER							4B
1		1	1	LDW300-21801-3			BOX ASSY							4C
1	1	1	1	LDW300-21801-1			COVER ASSY							7B
	1			LDW390-21296-1			CONTROLLER ASSY (ELECTRICAL)							7B
1		1		LDW390-21056-3			CONTROLLER ASSY (ELECTRICAL)							7B
			1	LDW390-21056-1	E		CONTROLLER ASSY (ELECTRICAL)	SEE DWG						7B
1				LDW300-21801-19	E		HOUSING ASSY	SEE DWG						4C
				LDW300-21800-7	S		CONTROLLER ASSY	SEE NOTE 14				NONE	NONE	
				LDW300-21800-5	S		CONTROLLER ASSY	SEE NOTE 14					NONE	
				LDW300-21800-3	S		CONTROLLER ASSY	SEE NOTE 14					NONE	
				LDW300-21800-1	S		CONTROLLER ASSY.	SEE NOTE 14				NONE	NONE	

SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC

I & T: IDENTIFICATION AND TRACEABILITY IN ACCORDANCE WITH LPC-19-2 (GRUMMAN) LPC-19-3 (VENDOR)

GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO.		
B	26512	LDW300-21800	D

SCALE NONE SHEET 2.00

ENG 77.2 5-64

-7	-5	-3	-1	PART NO.	I&T	CODE IDENT	NOMENCLATURE OR DESCRIPTION	MATERIAL	GOVT SPEC	COML SPEC	STOCK SIZE	PROCESS SYM	FINISH NO.	ZONE
QTY PER ASSEMBLY														
1				LDW300-21800-17	E		NAMEPLATE	MAKE FROM GN11D-1				NONE	SEE NOTE 5	4C
	1			LDW300-21800-15	E		NAMEPLATE	MAKE FROM GN11D-1				↕	↕	4C
		1		LDW300-21800-13	E		NAMEPLATE	MAKE FROM GN11D-1				↕	↕	4C
			1	LDW300-21800-11	E		NAMEPLATE	MAKE FROM GN11D-1				NONE	SEE NOTE 5	4C
AS	REQD			RTV-731	E		ADHESIVE	(SEE NOTE 8)						
4	4	4	4	NAS1218-08CR-3B			SCREW	STD. PART	(SEE NOTE 11)					7B
18	18	18	18	NAS1218-08CR-2B			SCREW	↕	(SEE NOTE 11)					4B
2	2	2	2	NAS1202-6			SCREW							4B
1	1	1	1	NAS1202-3			SCREW							4B
1	1	1	1	NAS1081C08A6L			SCREW							
														4B
AS	REQD			MS20995C20			LOCK WIRE							6B
1	1	1	1	MS21042-L4			NUT							7B
1	1	1	1	MS21042-L3			NUT							4C
✓	✓	✓	✓	MS20470-AD4			RIVET							6B
1	1	1	1	MS16628-4050			RING							3B
1	1	1	1	MS19059-16			BALL							
														6B
1	1	1	1	AN960C816L			WASHER (SEE NOTE 11b)							7C
1	1	1	1	AN960D516L			WASHER							6B
1	1	1	1	AN960D416L			WASHER							7B
1	1	1	1	AN960D10L			WASHER							
26	26	26	26	AN960D8L			WASHER							
														4C
4	4	4	4	AN525-832-7	E		SCREW	STD PART						

SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC

I&T: IDENTIFICATION AND TRACEABILITY IN ACCORDANCE WITH

GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO.		
B	26512	LDW300-21800	D

SCALE NONE SHEET 2:01

ENG 77.2 5-64

ENG 32.1 REV 3-65

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER

DWG. NO. LDW300-21800		EO NO. D2
CONTROL INFO NO. LDW300-232		

LDW300-21800-5

IN F/D & B/M FOR -5: ADD LDW300-21801-17, DELETE LDW300-21801-3.

IN F/D, ADD NOTE:
14. THE FOLLOWING PARTS ARE INTERCHANGEABLE & SHALL BE USED FOR FUTURE REPLACEMENTS & SPARES:

LDW300-21800-5 INTERCHANGEABLE WITH { LDW300-21800-3, LDW300-21800-1
LDW300-11812-21 " " LDW300-11812-19

IN F/D. AT LDW300-11812-21 CALL OUT, ADD (SEE NOTE 14).

IN B/M, FOR -1, -3, -5 AND FOR LDW300-11812-19 & LDW300-11812-21, ADD (SEE NOTE 14)

IN TABLE I, FOR BREAKOUT FORCE (X-X, Y-Y AXIS) CHANGE 2.50-1.25 LB TO 2.75-1.25 LB.

| DETAIL SPEC REQ | | CL II ENGRG CHG | | CL I ENGRG CHG | | |

ENG 32.1 REV 3-65

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512

ENGINEERING ORDER

DWG. NO. LDW 300-21800		EO NO. D3
CONTROL INFO NO. LDW 300 - 291		

DELETE FROM B/M:

LMS #1 & #2 EFFECTIVITY FOR LDW 300-21800-13 NAMEPLATE AND LDW 300-21800-3 ASSEMBLY

ADD TO FIELD & B/M:

LDW 300-21800-7 ASSEMBLY, LDW 300-21800-17 NAMEPLATE, AND LDW 300-21800-9 FRAME ASSEMBLY FOR LMS #1 & LMS #2.

(LDW 300-21800-7 ASSEMBLY IS THE SAME AS LDW 300-21800-3 ASSEMBLY EXCEPT FOR -17 NAMEPLATE & -19 FRAME ASSEMBLY)

* -7 MAY BE MADE BY REWORKING -3

DETAIL SPEC REQ		CL II ENGRG CHG		CL I ENGRG CHG		LCO 2148 9-22-67

REASON FOR EO

INSTALL REVISED SOFT STOP IN LMS #1 & #2

DESCRIPTION OF EO

DELETE LDW 300-21800-3 & -13 AND ADD LDW 300-21800-7 & -17 EFFECTIVITY FOR LMS #1 & #2

GAEC W EO RELEASE: JK 9-22-67

MODEL	EFFECTIVITY: PROCURING ACTIVITY NO.	GAEC UNIT NO.	SUR CONTR UNIT NO.	DRAWING CHANGE REQD: REVISE DWG	RECORD EO	DISPOSITION OF PARTS: REWORK	SCRAP	APPROVED BY	DATE	SUPPORT	RELIAB. GROUP	GROUP LEADER	STRESS GROUP	LIAISON ENGRG	PROJ ENGRG
				✓		*✓						9-18-67			9/19/67
LM	LMS #2														
LM	LMS #1														

PRIORITY: C

DRAWING TITLE: CONTROLLER ASSY. STAB & CONTROL - TRANSLATION

DRAWING NO.: LDW 300-21800

EO NO.: D3

ISSUED BY J. KELLY 1671 9-8-67 SECTION GN&C GROUP NO. 300 PL 25